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ABSTRACT

Followup studies of graduates of the Tennessee Technological University have been conducted and reported since 1973. This report presents the findings of the seventh year of the project. The first chapter contains an overview of the total operation and a summary of the major purposes of the project. Chapter two contains a presentation and analysis of data for those individuals who participated in the survey for the first time in 1979, and a comparison of data from other first year participants. Chapter three presents summaries and abstracts of special studies conducted during the past year and summaries of studies currently underway. The appendix of this report contains a complete listing of all papers generated by this study. (JD)

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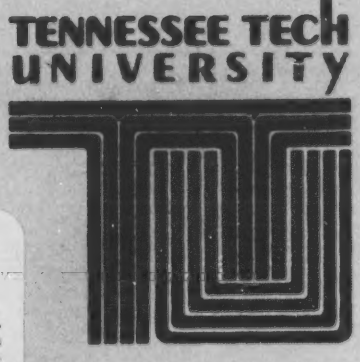
STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 80-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL - YEAR VII

AUGUST, 1980

TENNESSEE TECH UNIVERSITY



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Cookeville, Tennessee

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REPORT 80-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL-YEAR VII

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August 1980

Tennessee Technological University

Cookeville, Tennessee 38501

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ABSTRACT

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL-YEAR VII

In 1973 Tennessee Technological University developed and implemented a model for systematic data gathering and for making evaluations of the programs in teacher education. The specific objective of the use of the longitudinal model was the evaluation of and subsequent modification of the improvement of the programs for the preparation of teachers. During the seventh year of the project (1979-1980) five distinct groups of graduates who had completed either the B.S. or M.A., with major emphasis in a teaching field participated in the study. The sample size by year of graduation was as follows: (1) 1975, 5; (2) 1976, 6; (3) 1977, 19; (4) 1978, 22; and (5) 1979, 61 (including 41 B.S. and 20 M.A. graduates). Detailed information was collected on each subject by use of standardized instruments administered by specially trained graduate assistants or from University records. Basic instrumentation and procedures included: (1) University records; (2) principal's evaluations, (3) the California F-Scale, (4) a measure of the satisfaction of the students of the graduates, and (5) observation by trained observers using Flanders Interaction Analysis, the Classroom Observation Record and the Tuckman Teacher Feedback Form. All data obtained in the study were classified, coded and key-punched for analyses. Descriptive statistics, intercorrelations and comparisons were computed.

The major findings of the study for the first year subjects were similar to those reported in the past. Detailed comparisons across years for all first year B.S. subjects by level (elementary or secondary), indicated few differences. Comparisons of 1979 B.S. and M.A. graduates indicated that the latter group generally received higher ratings or scores. Detailed comparisons were made across five years for three groups of B.S. level subjects, i.e., those who participated from 1973-1977, 1974-1978 and 1975-1979. The data were further divided by teaching level. In general, the subjects appeared to receive their highest ratings or scores during the third or fourth year they participated in the study. Few of the differences noted were significant. Possible explanations for the differences and changes were noted in the report. Based on the results of the study, conclusions and recommendations have been advanced that are being used to modify and improve the teacher education programs of the University.

Based on the results of the study and the applications that have been made in improving the teacher preparation programs of the University, the model has become a permanent operational feature of the College of Education. Other institutions of higher education can easily adopt or adapt the model for use in their own institutions.

PREFACE

For the past ten years, attention has been given to the evaluation of the graduates of the teacher education programs of Tennessee Technological University. Followup studies of all graduates have been conducted on a regular basis and special studies have been carried out to provide input for the overall operation of the programs of the University. In order to improve the system of evaluation at the institution, an intensive longitudinal study was initiated in the fall of 1973 of the graduates. This study was continued through 1979-1980 utilizing a modified model that was previously developed for evaluating graduates of teacher education programs. Reports of the results of the application of the model for the period 1973-1974 through 1978-1979 are available through the ERIC system or from the Office of the Associate Dean of the College of Education of Tennessee Technological University.

The purpose of this present report was to present the findings of the seventh year of the application of the Tennessee Technological University Teacher Evaluation Model. In turn, this report will be utilized by providing input into the total system of teacher education at the University. This report is by no means complete; however, it serves to inform the reader of the basic procedures used and the preliminary findings of the seventh year of the study. In order to conserve paper, only essential information was presented.

The author of this report is indebted to the efforts of several individuals that have been extensively involved in working with the project during the past year. These individuals include: Glenda S. Qualls, Analyst; Patricia Kingsley, Graduate Assistant; Lee Henley, Graduate Assistant; Carmel Threet, Graduate Assistant; Sharon Heard, Secretary; Terry Huffman, Secretary; and Dr. John D. Thomas, Associate Professor of Educational Psychology and Counselor Education. In addition, thanks are extended to all principals, teachers, superintendents and other school personnel that provided technical assistance, data, and allowed the project staff to work with them in various ways.

Jerry B. Ayers
Associate Dean
College of Education
August 1980

CHAPTER I

INTRODUCTION AND PROCEDURES

Introduction

Beginning in 1970, a series of separate studies was begun related to the evaluation of students enrolled in and graduates of the teacher education programs of Tennessee Technological University. The research has been systematic and designed to meet standards established by the National Council for Accreditation of Teacher Education, as well as to answer such questions as course effectiveness, the proper sequence of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated competencies of the teacher education program. It should be noted that there are companion studies to evaluate the programs designed to prepare school service personnel at the M.A. and Ed.S. levels (see Appendix).

The works of Sandefur and Adams (1 - 3) led to the development of a model (Tennessee Technological University Teacher Evaluation Model) for the evaluation of graduates of the programs of the University designed to prepare teachers at the bachelor's and master's levels (4). During 1973-1974 the Evaluation Model was implemented and continued through 1979-1980 with funds available from the budget of the College of Education of the University. The results of the application of the model were summarized in a series of yearly reports (5 - 10). These reports are available through the ERIC system.

The seventh year of the application of the Evaluation Model was initiated in the fall of 1979. The remainder of this chapter describes the purpose of the seventh year of the operation of the model and limitations of and the procedures used in conducting the major phases of the study. Chapter II contains presentations and interpretations of the data for the current year of the study and comparisons with earlier years. Chapter III consists of summaries of several special studies that were completed or partially completed during 1980-81. Complete copies of the papers are available through the Office of the Associate Dean, the ERIC System or the indicated professional journals. Chapter IV contains a summary, conclusions and recommendations, and tentative plans for continuation of the study during 1980-1981. The Appendix contains a listing of all evaluative studies that have been conducted as a part of the efforts of the Office of the Associate Dean.

Purposes

The purposes of the study reported in this document included the following:

1. To provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long-range plans for improving the total program of the University with particular emphasis on the teacher education program.

3. To continue the development and refinement of the Tennessee Technological University Teacher Evaluation Model.

Specific objectives to be accomplished as a part of this study were as follows:

1. To continue studying in a longitudinal manner those subjects who had previously participated in the application of the Model (1975-1976 through 1978-1979).

2. To provide a descriptive profile of a sample of 1979 B.S. and M.A. graduates of the teacher education programs of Tennessee Technological University.

3. To determine relationships among selected variables that were measured as a part of the total study.

4. To provide comparisons between the graduates of the teacher education programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the literature of teacher education.

5. To disseminate relevant research data to the faculty and administration of the University.

6. To provide information and suggestions for curriculum evaluation and development based on empirical research data.

7. To continue to evaluate the procedures employed in the study and to make long-range plans for modifications and refinement of the basic Evaluation Model.

Limitations

The general limitations for this study were primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were 1979 graduates of a bachelor's or master's level program at Tennessee Technological University designed to prepare them as teachers or they were individuals who participated in the study during the period 1975-1976 through 1978-1979.

2. Subjects were teaching in the State of Tennessee within a 100-mile radius of Cookeville, Tennessee. (Approximately 70 percent of all graduates of the teacher education programs of the University, that were teaching, resided within the specified geographical limits of the study.)

3. The subjects volunteered to participate in the study.

4. The subjects who participated in the study received the permission of their principals and superintendents.

5. The sample sizes of the 1975, 1976, 1977 and 1978 graduates were reduced each year by about 35 percent due to attrition from the teaching profession or moving out of the geographical limits of the study. Therefore, the findings of the study may be limited in their applicability to the population of graduates from the University and also other institutions.

Limitations 1 through 4 above were imposed in order to make the study more feasible regarding the followup of the graduates. Voluntary participation was deemed necessary due to the extensive collection of data and completion of forms. The limitation of a 100-mile radius of Cookeville, Tennessee was necessary because of the limited travel funds available and the time available for the research assistants to visit in the classrooms of the participating subjects.

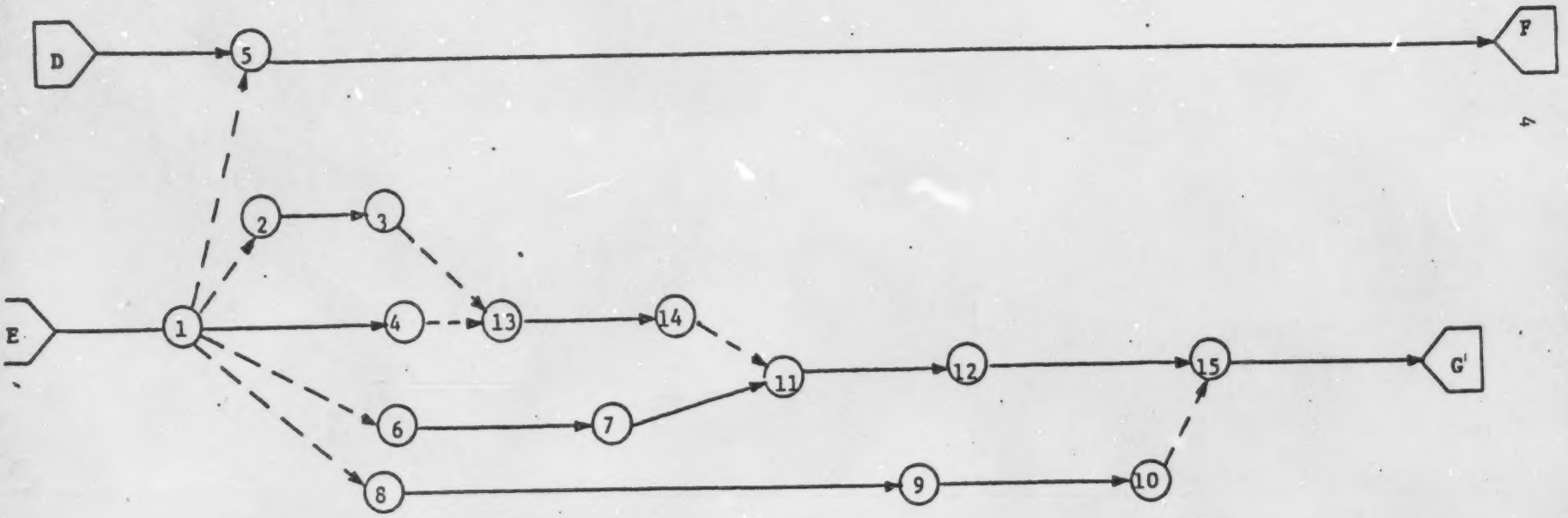
Procedure

The purpose of this section was to provide the reader with a brief description of the procedures employed in collecting data utilized in this study. This section was concerned specifically with selection of subjects, implementation of the study, training of staff, and methods of data collection and analysis. Figure 1 shows a PERT chart of the major activities of the project from September 1979, through June 1980. In order to conserve space the reader is referred to previous reports (5 - 10) for a more complete description of such topics as instrumentation and training of observers.

Selection of Subjects

Five groups of subjects participated in the 1979-1980 phase of the project. The first group of individuals (1975 graduates) was participating in the project for the fifth year, while the second group (1976 graduates) was participating for the fourth year. The third, fourth and fifth groups consisted of those individuals that received either the B.S. or M.A. in, respectively, 1977, 1978 or 1979. Table 1 shows a summary of the number of individuals (by year of graduation) participating in each phase of the study, and Table 2 shows a summary of the grade level in which the subjects were teaching during 1979-1980.

Table 3 shows a summary of the reasons and numbers of individuals failing to participate in the 1979-1980 phase of the study. This table shows the number withdrawing from the study by original date of graduation from the University. Between 1978-1979 and 1979-1980, 42 individuals withdrew; 19 individuals (45.3 percent) felt the objectives of the project were not compatable with personal objectives, 1 individual (2.8 percent) moved into a nonteaching profession, 6 individuals (14.3 percent) left the teaching profession, 4 individuals (9.5 percent) moved out of the service area of the project, and 12 individuals (28.6 percent) gave another reason, no reason, or could not be located. The overall attrition between the two years of 42 individuals was 38.8 percent. This figure is comparable with the level of attrition between other years of the study (6 - 10). Table 4 shows a comparison of sample size, across all years, from which actual usuable data were collected.



Summary of Activities

1-4 Finalize Plans for Visiting Subjects in 1975-78 Phases of Study
2-3 Training of Observers
5-- Continuing Contact With Other Projects and Survey of the Literature
6-7 Survey All 1979 Graduates
8-9 Conduct Other Related Studies
9-10 Prepare Reports of Related Studies
7-11 Select Sample of 1979 Graduates for Intensive Study as Part of Followup
11-12 Make School Visits on 1979 Graduates
13-14 Make School Visits on 1975-78 Graduates
12-15 Complete Reports and Submit
15--- Begin Making Plans for 1978-81 Phase of Study

Figure 1: PERT Chart of Major Activities for 1979-80

TABLE 1

NUMBER OF SUBJECTS BY YEAR OF GRADUATION PARTICIPATING IN EACH PHASE OF STUDY

Phase of Study	1975	1976	1977	1978	1979	Total
1975-1976	12/32	--	--	--	--	12/32*
1976-1977	5/20	5/21	--	--	--	10/41
1977-1978	5/13	2/14	23/30	--	--	30/57
1978-1979	5/8	3/8	14/13	21/36	--	43/65
1979-1980	1/4	2/4	9/10	11/11	20/41	43/70

*No. M.A./No. B.S.

TABLE 2

SAMPLE FOR INTENSIVE FOLLOWUP - 1979-1980

Year	K	1-3		4-7		8-12**	SPED	Total
1975	0/0	0/0	0/0	1/1	0/0	0/2	0/1	1/4*
1976	0/0	0/2	0/0	0/1	0/0	1/1	1/0	2/4
1977	0/0	1/1	0/0	2/5	0/0	4/3	2/1	9/10
1978	1/0	1/1	0/0	1/2	1/0	5/3	2/5	11/11
1979	1/5	5/5	1/1	1/9	0/1	4/10	8/10	20/41
Total	2/5	7/9	1/1	5/18	1/1	14/19	13/17	43/70

*No. M.A./No. B.A.

**Teaching areas: 1-Bible, 1-Building Trades, 5-English, 1-French, 1-Health, 3-History, 2-Industrial Arts, 6-Math, 4-Music, 3-Physical Education, 1-Psychology and 5-Science.

TABLE 3

REASONS AND NUMBER OF INDIVIDUALS DROPPING OUT OF STUDY FROM 1978-1979 to 1979-1980 (BY YEAR OF GRADUATION FROM UNIVERSITY)

Reason	1975	1976	1977	1978	Total
Felt objectives of project were not compatable with personal objectives	1	5	3	10	19
Moved into non-teaching position in schools	0	0	0	1	1
Left teaching profession	0	0	0	6	6
Other reason	1	0	2	2	5
Unable to locate (No response to questionnaire, phone calls or no forwarding address at Post Office)	0	0	0	3	3
Moved out of service area	1	1	0	2	4
No reason given	1	0	0	3	4
Total	4	6	5	27	42

TABLE 4

COMPARISON OF SAMPLE SIZES ACROSS YEARS

Year of Graduation	1973	1974	1975	1976	1977	1978	1979
1973	57	35	27	21	15	--	--
1974	--	48	26	22	14	9	--
1975	--	--	44	23	17	11	5
1976	--	--	--	26	16	11	6
1977	--	--	--	--	50	26	19
1978	--	--	--	--	--	45	22
1979	--	--	--	--	--	--	61
Total	57	83	97	92	112	102	113

As a part of the routine followup activities of the Office of the Associate Dean, all 1979 graduates of the teacher education programs were contacted in the late fall of 1979 (271 B.S. graduates and 160 M.A. graduates). As a result of this initial survey (11), all graduates who were teaching within the defined geographical limits of the project were contacted by mail and/or telephone and asked to participate in this study. A total of 41 B.S. and 20 M.A. level graduates volunteered to participate (see Tables 1 and 2).

Figure 2 shows a map of selected portions of Tennessee. The numerals within each county indicate the number of individuals who participated in the study during the 1979-1980 year. Table 5 shows a summary of the number of individuals by year of graduation participating from each county.

Instrumentation

Instrumentation for the 1979-1980 study was identical to that used during the past several years of the project. The reader is referred to Reports 77-2 and 78-2 (8,9) for more information with regard to instrumentation.

Training of Observers

The procedures for the training of observers were outlined in Reports 74-4 and 77-2 (5,8).

Collection of Data

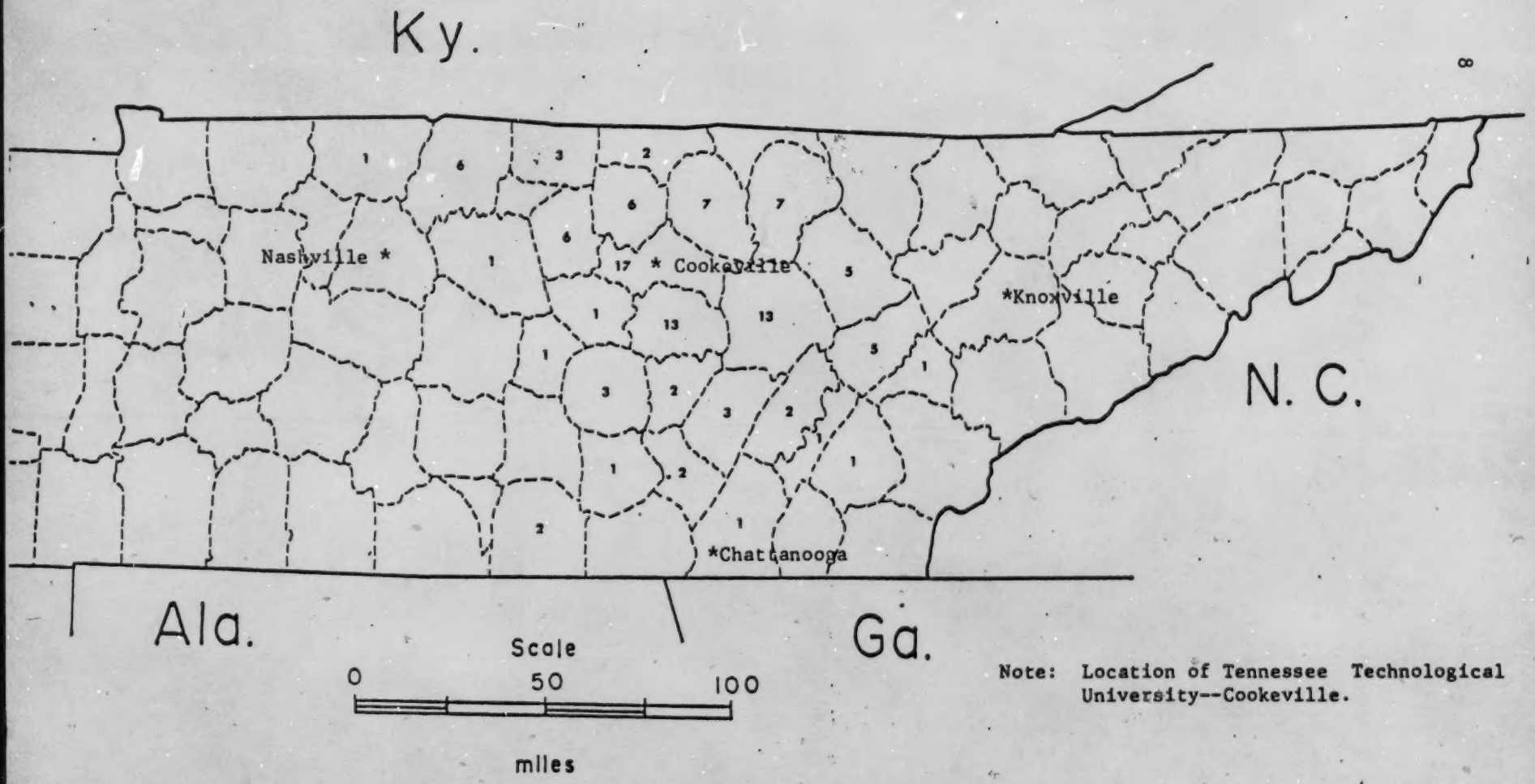
Data for this study were collected by mail surveys, interviews and observations in the classrooms of graduates. Initially, all subjects were contacted by mail and dates were set for observational visits by the graduate research assistants (both previous subjects and new subjects in the study). These dates were verified with the appropriate administrative authorities in each school and school system. A letter explaining the project in detail was sent to all subjects, principals, and superintendents. The subjects, their principals, and superintendents were invited to make comments and suggestions for conducting the study.

Each subject was visited on at least one occasion by the trained graduate assistant. The observer spent approximately a half day in each subject's classroom and completed from two to six 20 minute periods observing, using a ten category system of interaction analysis. At the completion of all observations, the Classroom Observation Record and the Tuckman Teacher Feedback Form were completed.

The appropriate version of the Student Evaluation of Teaching (SET) was administered during the visit. The instrument was completed by at least one class of students. While the students were completing the SET, subjects who were participating in the project for the first year completed the California F-Scale.

During the course of the day, the observer interviewed each student with regard to their opinions and ideas about the teacher preparation program of the University. Also, the observers asked each principal to complete the Principals Questionnaire and also the Teacher Evaluation by Supervisor Form.

Pertinent data such as quality point average, National Teacher Examinations scores, etc., were collected from the permanent records of all 1979 graduates.



Note: Location of Tennessee Technological University--Cookeville.

Figure 2. Number of Participants By County in 1979-1980 Phase of Study

TABLE 5

NUMBER OF SUBJECTS BY DATE OF GRADUATION AND
COUNTY IN WHICH TEACHING 1979-1980

County	1975	1976	1977	1978	1979	Total
Bledsoe					3	3
Cannon				1		1
Clay					2	2
Cumberland			3	3	7	13
DeKalb				1		1
Fentress	1		1	1	4	7
Franklin				1	1	2
Grundy					1	1
Hamilton					1	1
Jackson	1		1	1	3	6
Loudon			1			1
McMinn				1		1
Macon			1		2	3
Meigs					1	1
Morgan			1	1	3	5
Overton				3	4	7
Putnam		2	4	1	10	17
Rhea	1				1	2
Roane	1			1	3	5
Robertson				1		1
Sequatchie			1		1	2
Smith				1	5	6
Sumner		1	2	1	2	6
Van Buren		1		1		2
Warren		1		1	1	3
White	1	1	3	2	6	13
Wilson			1			1
Total	5	6	19	22	61	113

Analysis of Data

Basic descriptive and inferential statistical methods were used to analyze the data. These techniques were described in more detail at the appropriate points in this report.

Summary

In summary this chapter contains a brief overview of the total operation of the 1979-1980 phase of the longitudinal study of the graduates of the teacher education programs of Tennessee Technological University. Included in this chapter was a summary statement of the major purposes of the project, limitations of the study and the major procedures employed in conducting the study. Data were gathered from four major sources including self or personal, from supervisors and principals, students of the graduates, and by independent observers. Included in the chapter is a listing of the major instruments used in gathering data from the four primary sources. The major purposes and procedures of the project have remained virtually unchanged over the seven years of the study. It was felt the information available from this report and the companion reports completed during the period 1974 through 1979 will be useful to those individuals attempting to replicate this study. It should be pointed out that additional information and specifics related to methodology employed in this study were available from the Office of the Associate Dean, College of Education.

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10. Ayers, Jerry B. Report 79-2. Tennessee Technological University Teacher Evaluation Model-Year VI, Cookeville, TN: Tennessee Technological University, College of Education, 1979. (mimeo.), 56 pp. ERIC No. 179 535.

11. Ayers, Jerry B. Report 80-1. A Report of Three Surveys of the 1979 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1980. (mimeo.), 21 pp.

CHAPTER II

PRESENTATION AND ANALYSIS OF DATA FOR 1979 GRADUATES AND COMPARISONS WITH ALL FIRST YEAR GRADUATES 1975-1978

Chapter II contains a presentation and analyses of data for those individuals who received the B.S. or M.A. in 1979 and were participating in the study for the first time. Also shown are comparisons of the data with other first year participants for the period 1975 through 1978. These comparisons were confined to those individuals with the B.S.

The data for the B.S. subjects were presented in six parts, each corresponding to major instruments used to gather data. Each section contained a summary statement as well as a discussion of the relevant variables that were correlated. A seventh section shows comparison data between the 1979 B.S. and M.A. Graduates. Tables 6 and 7 show intercorrelation matrices of selected variables for respectively the B.S. and M.A. graduates. Only variables significant at or beyond the .05 level were discussed in the remainder of this report. It should be noted that the correlation patterns are similar to those reported in earlier years of the study.

An understanding of Chapter I of this report is essential for the effective utilization of Chapters II through IV. Also, reports 74-4, 75-4, 76-1, 77-2, 78-2, and 79-2 should be used as companion guides to obtain additional information that may be of interest to the reader. The Appendix of this report contains a complete listing of all studies conducted in the past ten years that may provide additional information about the evaluation studies conducted of the teacher preparation programs. Selected reports contain complete instrumentation used in the studies.

Career Base Line Data

This section contains a summary of preliminary career base line data for the 1979 B.S. subjects in the study. Included in this section was information taken from each subject's college transcript and other records available in the College of Education of the University. Also included were scores from the California F-Scale. Additional base line data for the 1979 graduates can be found in Report 80-1 (1). In order to avoid duplication and also to present the data in a more usable form each table shows comparison with other first year subjects in the study from 1975 through 1978.

The B.S. level subjects who were participating in the study for the first year in 1979 appeared to be similar to those from previous years. The mean quality point average for four years of study was 3.28 (SD=0.45) for the elementary group and 3.05 (SD=0.46) for the secondary group. The means were slightly above those (not significantly) reported for the 1978 group. In general the subjects who have participated in the study in the past have achieved higher quality point averages than the average graduate of the University's teacher preparation programs.

TABLE 6

CORRELATION MATRIX OF SELECTED VARIABLES - B.S. GRADUATES IN FIRST YEAR OF STUDY*

	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Wt. Commons (NTE)	39	1000	329	766	-018	-043	-032	-014	-325	-304	-180	-420	-339	-171	-362	-149	122	-098	-229	242	-022	009	-006	116	298	220	150	159	122	-104	067	-177
2. Overall QPA	41		1000	486	101	118	107	-004	-119	102	040	-181	042	275	084	083	207	-063	-256	-021	180	286	278	215	300	248	126	-015	419	052	286	220
3. ACT Composite	32			1000	-076	-120	009	-011	-138	-157	115	-192	-415	-113	-253	-125	143	-271	-247	372	-037	-017	-060	235	448	373	-011	470	148	-160	056	-307
Principal Evaluation																																
4. I	41				1000	701	723	670	-083	493	485	369	-115	511	478	100	190	-055	-039	-042	444	408	400	-140	-066	-126	462	-379	283	241	392	272
5. II	41					1000	702	670	-047	379	534	250	-110	427	393	089	142	-052	059	033	411	340	333	-106	-123	-128	260	-313	291	309	508	393
6. III	41						1000	724	019	190	685	046	047	294	302	018	126	-118	083	032	404	229	214	114	-127	022	272	-453	176	175	299	207
7. IV	41							1000	-008	386	710	235	-209	360	372	135	230	-205	-019	-028	296	206	157	-054	-255	-156	319	380	173	168	242	190
8. F-Scale	38								1000	139	226	001	130	055	139	167	072	-304	-086	-190	-069	-103	-108	-188	-298	-267	-389	-229	-102	-032	-148	-136
Student Evaluation of Teaching I																																
9. I	23									1000	589	806	008	801	902	295	196	067	-145	-163	118	426	264	-	-	-	-	-	515	024	274	627
10. II	23										1000	392	104	586	688	192	203	-138	176	070	131	109	062	-	-	-	-	-	238	016	067	125
11. III	23											1000	-119	737	821	085	-193	114	018	-087	-212	181	-020	-	-	-	-	-	272	047	016	650
12. IV	23												1000	030	260	122	-192	-022	403	-216	271	-035	240	-	-	-	-	-	-109	-098	129	029
13. V	23													1000	901	208	033	-106	066	-070	038	408	246	-	-	-	-	-	416	105	227	541
14. VI	23														1000	242	-013	-012	130	-138	073	319	223	-	-	-	-	-	379	038	203	524
Interaction Analysis																																
15. I/D	40															1000	118	-079	-096	-771	307	281	337	-500	-107	-401	136	-108	331	164	166	368
16. I/d	40																1000	-158	-219	191	212	198	242	-363	091	-213	034	174	317	089	265	125
17. ST/TT	40																	1000	303	087	-037	-016	077	210	-008	144	-061	275	-069	111	169	210
18. Sil/Tot	40																		1000	-002	085	-128	085	198	122	196	-037	446	-322	-242	154	-061
19. Lec/Tot	40																			1000	-293	-369	-272	344	183	328	-007	470	-251	084	-077	-381
Classroom Observation Record																																
20. I	41																				1000	709	709	046	276	165	-031	-143	513	135	812	421
21. II	41																					1000	674	121	202	182	065	-240	713	092	695	791
22. III	41																						1000	-016	356	159	-068	-020	445	018	692	508
Student Evaluation of Teaching II																																
23. I	35																							1000	440	506	-228	251	124	-298	146	120
24. II	36																								1000	779	-213	696	325	-248	351	-039
25. III	36																									1000	-259	503	242	-324	270	066
26. IV	36																										1000	-298	-081	117	-046	035
27. V	36																											1000	-208	-263	058	-399
Tuckman																																
28. I	41																												1000	241	606	583
29. II	41																													1000	277	273
30. III	41																														1000	584
31. IV	41																															1000

*Underline indicates a correlation significant at or beyond the .05 level. Decimal points have been omitted.

TABLE 7

CORRELATION MATRIX OF SELECTED VARIABLES - M.A. GRADUATES IN FIRST YEAR OF STUDY*

	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Wt. Comm SIE	9	1000	855	779	231	102	-387	102	358	-	-	-	-	-	-	219	130	163	-349	050	720	535	528	-049	125	-449	075	-697	282	-363	796	422
2. Overall QPA	18		1000	668	096	021	-237	-152	235	-730	-169	-497	-356	-285	-585	046	117	-126	-475	144	358	325	317	222	345	-161	127	-497	138	-401	668	088
3. ACT Composite	13			1000	-263	-126	-474	-303	501	149	136	950	-843	677	818	-150	-040	-186	-099	315	-010	-109	132	-115	-121	-245	015	-360	-386	-327	117	011
Principal Evaluation																																
4. I	18				1000	461	535	773	283	561	233	527	785	041	615	464	035	-194	-012	-544	479	482	411	310	516	555	-173	-081	470	211	525	361
5. II	18					1000	461	722	219	078	231	615	207	596	547	308	-252	-071	044	-505	255	113	054	-267	-003	-226	-194	-400	228	-053	350	254
6. III	18						1000	618	274	788	723	892	732	395	955	598	164	128	-072	-642	164	193	213	528	567	599	285	316	342	056	267	196
7. IV	18							1000	283	788	723	892	732	395	955	699	-045	-191	075	-686	610	242	296	-156	034	250	-466	-006	383	203	553	311
8. F-Scale	18								1000	493	243	164	965	-480	341	497	-033	030	-040	-465	-038	111	149	062	013	-099	355	-257	050	-013	062	118
Student Evaluation of Teaching I																																
9. I	6									1000	683	738	650	162	829	568	440	-154	533	683	120	-382	237	-	-	-	-	-	-241	130	461	-263
10. II	6										1000	749	437	290	765	651	658	-394	-182	-465	022	-580	166	-	-	-	-	-	-423	154	636	-129
11. III	6											1000	360	718	972	107	288	-506	177	-097	208	-389	299	-	-	-	-	-	-221	332	541	013
12. IV	6												1000	-317	536	520	-436	009	613	-748	005	-414	-378	-	-	-	-	-	-304	571	614	-406
13. V	6													1000	582	-473	096	-395	-154	583	383	066	554	-	-	-	-	-	184	182	207	469
14. Total	6														1000	226	248	-388	317	-268	252	-378	254	-	-	-	-	-	-200	427	642	-025
Interaction Analysis																																
15. I/D	18															1000	327	291	-497	-808	206	337	174	366	384	243	116	-252	391	-171	215	200
16. I/d	18																1000	-190	-457	092	089	214	273	206	146	-095	316	198	278	-328	039	-010
17. ST/TT	18																	1000	015	-268	-048	064	-239	-021	198	152	227	298	-043	042	-086	003
18. SII/Tot	18																		1000	115	-274	-340	-224	-282	-195	071	063	180	-424	280	-256	-155
19. Lec/Tot	18																			1000	-174	-298	-118	-213	-334	-285	118	193	-376	108	-237	-274
Classroom Observation Record																																
20. I	18																				1000	834	791	238	376	160	-187	-237	806	080	822	666
21. II	18																					1000	735	432	550	244	-014	-090	879	-127	555	779
22. III	18																						1000	355	405	288	153	025	758	032	576	424
Student Evaluation of Teaching II																								1000	893	477	506	-259	247	-038	043	268
23. I	12																								1000	598	456	-347	284	-020	263	313
24. II	12																									1000	-070	251	107	343	057	032
25. III	12																										1000	-300	-050	-026	-247	302
26. IV	12																											1000	076	-056	-279	-145
27. V	12																															
Tuckman																													1000	-005	560	611
28. I	18																													1000	158	-093
29. II	18																														1000	462
30. III	18																															1000
31. IV	18																															

*Underline indicates a correlation significant at or beyond the .05 level. Decimal points have been omitted.

Table 8 shows a comparison of the American College Test scores (ACT) for the period 1975 through 1979 for first year elementary subjects. In general the subjects were near the mean for all students enrolled at the University. Use of the analysis of variance techniques indicated the subjects in the 1978 group had achieved a significantly lower mean score on the mathematics section of the test than subjects in other groups. In general the trend has been toward lower mean ACT scores. Table 9 shows a comparison of ACT scores for the secondary group. In general there were no significant differences across the groups. The small N size in some cases does not allow for meaningful comparisons of the data. Significant correlations were noted between ACT scores and overall quality point average (+), NTE scores (+), the Non-Directive (-) factor of the SET-I, Lecture/Total ratio from the Flanders Interaction Analysis (+), and the Warmth and Acceptance factor from the Tuckman Teacher Feedback Form.

The California F-Scale Forms 45 and 40 was used to assess one aspect of the personality of the subjects. The F-Scale range of possible values was 28 to 196 with 112 the mid-point. The lower the values, the more non-authoritarian the indication. The mean score for all graduates who have participated in the study is 100. Table 10 shows a comparison of all first year subjects by level, for the period 1975 through 1979. In general, secondary subjects tended to be more authoritarian than elementary subjects, however the differences were not significant. The correlation pattern indicated no significant relationships.

Table 11 shows a comparison of Weighted Common Examination Scores from the National Teacher Examinations for elementary and secondary subjects by years of graduation. In general secondary subjects had slightly higher scores than the elementary subjects. However, once again, the differences were not significant. Significant positive correlations of NTE scores were noted with ACT scores and overall QPA, and negative correlations with the F-Scale, and lively and interesting and total score from the SET-I, were noted with ACT scores.

Principal Evaluations of Subjects

The principal of each subject was asked to complete two instruments designed to evaluate weaknesses and strengths of the individual. The first instrument consisted of 59 items related to the teacher education program of the subjects and has been used over the past ten years. The results were very similar to those previously reported and have been omitted from this report. The second instrument, the Teacher Evaluation by Supervisor form, consists of four questions encompassing the following areas: (a) subject matter competence, (b) relations with students, (c) appropriateness of assignments, and (d) overall effectiveness. Tables 12 and 13 show, respectively, the data for the elementary and secondary groups during their first year in the study. Over the five year period there appeared to have been a gradual increase in the mean ratings given to the subjects in the elementary groups. There are variables among the secondary groups and no clear pattern was established because of the small N size. Significant correlations were noted between various factors from the principals evaluation instrument and factors from the Student Evaluation of Teaching, the Classroom Observation Record and the Tuckman Teacher Feedback Form. The factor "Relations with Students" from the principals questionnaire was significantly related to the

TABLE 8

COMPARISON OF ACT SCORES FOR FIRST YEAR ELEMENTARY TEACHERS (1974-1979)

	1975(N=17)		1976(N=15)		1977(N=14)		1978(N=17)		1979(N=20)	
Score	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
English	19.5	4.8	19.1	3.0	20.0	3.9	19.1	3.7	18.5	4.4
Mathematics	16.2	5.0	16.7	6.0	17.4	6.7	13.7	6.7	15.7	5.8
Social Science	20.4	5.3	17.9	6.2	19.6	7.4	16.6	7.0	16.1	7.1
Science	20.3	3.9	20.2	3.7	19.6	5.6	19.8	4.6	17.8	5.4
Composite	19.2	3.6	18.7	3.8	19.4	5.1	17.6	4.5	17.1	4.7

TABLE 9

COMPARISON OF ACT SCORES FOR FIRST YEAR SECONDARY TEACHERS (1975-1979)

	1975(N=9)		1976(N=4)		1977(N=10)		1978(N=4)		1979(N=13)	
Score	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
English	17.4	7.0	19.8	4.1	18.6	4.5	19.5	1.3	18.3	5.4
Mathematics	17.3	5.9	16.0	9.1	19.6	7.6	21.8	1.7	22.2	6.4
Social Science	14.1	8.0	19.5	4.8	19.5	5.7	22.5	3.7	17.7	7.5
Science	17.0	6.3	22.3	1.5	20.4	7.7	19.8	3.5	21.1	5.4
Composite	16.8	5.4	19.5	3.1	19.8	5.8	21.0	2.2	19.8	4.5

TABLE 10

COMPARISONS OF F-SCALE SCORES FOR FIRST YEAR ELEMENTARY AND SECONDARY TEACHERS (1975-1979)

	1975			1976			1977			1978			1979		
Level	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Elementary	22	101.5	23.6	11	95.9	13.7	17	99.5	20.8	21	103.4	22.2	21	105.2	18.5
Secondary	9	102.9	27.1	4	113.3	17.8	11	103.3	27.8	6	96.4	9.9	17	110.6	16.4

TABLE 11

COMPARISON OF WEIGHTED COMMON EXAMINATION SCORES FROM THE NTE FOR FIRST YEAR ELEMENTARY AND SECONDARY TEACHERS (1975-1979)

	1975			1976			1977			1978			1979		
Level	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Elementary	22	577.7	79.1	17	584.5	56.9	19	581.6	63.0	19	574.2	61.7	22	567.2	61.9
Secondary	9	543.8	87.9	4	597.3	45.6	11	585.3	30.2	6	606.5	73.6	17	579.6	83.7

TABLE 12

COMPARISON OF PRINCIPALS RATINGS OF FIRST YEAR ELEMENTARY TEACHERS (1975-1979)

FACTOR	1975(N=20)		1976(N=16)		1977(N=18)		1978(N=14)		1979(N=24)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.1	0.6	4.4	0.7	4.3	0.7	4.5	0.6	4.3	0.8
II RELATIONS WITH STUDENTS	4.4	0.6	4.6	0.6	4.4	0.6	4.4	0.9	4.5	0.7
III APPROPRIATENESS OF ASSIGNMENTS	4.3	0.7	4.4	0.7	4.4	0.6	4.3	1.1	4.3	0.7
IV OVERALL EFFECTIVENESS	4.1	0.7	4.5	0.6	4.2	0.7	4.4	0.7	4.3	0.7

TABLE 13

COMPARISON OF PRINCIPALS RATINGS OF FIRST YEAR SECONDARY TEACHERS (1975-1979)

FACTOR	1975(N=8)		1976(N=4)		1977(N=9)		1978(N=3)		1979(N=17)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.6	0.7	4.0	0.0	3.9	0.6	4.0	1.0	4.2	0.7
II RELATIONS WITH STUDENTS	4.8	0.7	4.3	0.5	4.3	0.7	4.7	0.6	4.0	1.0
III APPROPRIATENESS OF ASSIGNMENTS	4.3	0.9	4.0	0.0	3.9	0.6	4.0	1.0	4.1	0.9
IV OVERALL EFFECTIVENESS	4.4	0.7	3.8	0.5	3.8	0.4	4.0	1.0	4.2	0.8

democratic procedure and total score from the SET-I, all factors of the COR and TTFF.

Student Evaluation of Teaching

Two forms of the Student Evaluation of Teaching were employed in the study. The SET-I was used with children in the classes of subjects above the third grade, while the SET-II was used with children below the fourth grade. The instruments measure similar traits. Table 14 shows the data for the Student Evaluation of Teaching-I for those elementary subjects teaching in grades 4 through 6. In general there are few differences across the five years. Table 15 shows similar data for the secondary subjects. The wide variations were due to the small sample sizes. Significant positive correlations were noted betweeen the first and fourth factors and the fourth factor from the TTFF and Factor 1 of the COR (businesslike, responsible and systematic behavior of the teacher).

Student Evaluation of Teaching-II data was collected for those subjects teaching in grades K-3. This data is shown in Table 16 and again indicates few differences across the five year period. No additional significant relations were noted between the factors from the instrument and other scores.

Interaction Analysis

A ten category interaction analysis system was utilized to record observed classroom behavior of the subjects. The system proposed by Amidon and Flanders was implemented with the aid of three specially trained graduate assistants. A set of three to four observations was made on each subject. Each set contained from two to eight 20-minute periods of observation.

Tables 17 and 18 show the pertinent data gathered respectively on the elementary and secondary groups. The i/d ratios reported are above average for teachers reported in earlier studies. More indirect teaching has been associated in some studies with higher student achievement and positive attitude formation. The I/D ratio is also higher than the ratio of less than 1.00 reported for the average teacher. The subjects in this study used more acceptance of feeling, praising, or encouraging than average teachers. Other ratios in Table 17 and 18 are similar to the ratios for teachers reported in other studies. There were few differences between the groups and across the years. As would be expected secondary subjects were lecturing much more than elementary subjects. There were high intercorrelations among the various elements of the interaction analysis, however, correlations with other variables were limited to those noted above.

Classroom Observation Record

The Classroom Observation Record was completed on each subject by the observers at the conclusion of each visit. The instrument consisted of 22 items, four designed to assess pupil behavior and the remaining 18 assess dimensions of teacher behavior. Previous studies led to the conclusion that the instrument was measuring three factors as follows: Factor I consisted of items 10, 12, 14, 15, 16, 17 and 18, and corresponded in part to Ryans' Y_o factor of responsible, systematic, businesslike versus evading, unplanned, slipshod teacher behavior; Factor II consisted of items 5, 6, 7, 8, 9, 11, 13, 19, 20, 21 and 22, and corresponded to Ryans' X_o factor of kindly,

TABLE 14

COMPARISON OF SET I SCORES FOR FIRST YEAR ELEMENTARY TEACHERS (1975-1979)

FACTOR	1975 (N=10)		1976 (N=6)		1977 (N=7)		1978 (N=8)		1979 (N=7)	
I FRIENDLY AND CHEERFUL	344.8	34.0	330.5	37.8	335.0	62.1	334.6	46.3	337.9	36.8
II KNOWLEDGEABLE AND POISED	348.0	26.1	315.2	46.1	312.6	47.4	355.4	26.9	340.1	26.3
III LIVELY AND INTERESTING	298.8	41.5	286.0	35.1	296.3	30.3	301.0	39.7	309.9	28.7
IV FIRM CONTROL (DISCIPLINE)	324.2	37.2	295.3	33.5	285.7	77.8	311.1	35.6	309.6	41.9
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	245.3	57.3	271.3	35.1	222.7	43.9	285.0	40.8	284.6	57.0
COMPOSITE SCORE	312.2	28.5	299.7	23.5	290.1	40.6	317.4	28.9	316.4	24.7

TABLE 15

COMPARISON OF SET I SCORES FOR FIRST YEAR SECONDARY TEACHERS (1975-1979)

FACTOR	1975 (N=9) $\bar{X}$	1975 (N=9) SD	1976 (N=4) $\bar{X}$	1976 (N=4) SD	1977 (N=11) $\bar{X}$	1977 (N=11) SD	1978 (N=6) $\bar{X}$	1978 (N=6) SD	1979 (N=18) $\bar{X}$	1979 (N=18) SD
I FRIENDLY AND CHEERFUL	350.7	33.1	365.5	13.7	333.1	30.0	338.8	31.8	316.8	51.8
II KNOWLEDGEABLE AND POISED	396.6	23.7	350.0	16.9	333.3	21.9	299.8	39.9	335.6	34.2
III LIVELY AND INTERESTING	308.8	37.1	304.8	40.8	282.8	20.0	272.8	67.2	279.9	62.0
IV FIRM CONTROL (DISCIPLINE)	283.2	28.0	277.3	29.6	285.5	30.8	246.0	40.8	292.2	39.5
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	250.0	40.1	281.8	58.0	265.8	52.8	204.3	40.6	227.2	58.8
COMPOSITE SCORE	307.8	23.7	315.8	18.9	309.2	28.0	263.5	31.7	291.8	37.9

TABLE 16

COMPARISON OF SET-II SCORES FOR FIRST YEAR ELEMENTARY TEACHERS (1975-1979)

FACTOR		1975 (N=13)		1976 (N=8)		1977 (N=10)		1978 (N=12)		1979 (N=16)	
		X	SD	X	SD	X	SD	X	SD	X	SD
I	RAPPORT	5.83	0.74	5.66	0.37	5.52	0.61	5.45	1.78	5.40	0.53
II	INTERACTIONAL COMPETENCE	4.45	0.38	4.60	0.31	4.68	0.78	4.87	1.00	4.78	0.90
III	STIMULATING, INTERACTION STYLE (COMBINATION OF RAPPORT AND INTERACTIONAL COMPETENCE)	10.28	1.01	10.28	0.55	9.37	2.78	10.92	2.34	10.12	0.64
IV	UNREASONABLE NEGATIVITY	8.68	0.99	8.83	0.60	8.21	1.80	8.06	1.55	8.57	0.73
V	FOSTERANCE OF SELF-ESTEEM	6.48	0.78	6.83	0.47	6.78	0.79	6.94	0.65	6.76	0.50

TABLE 17

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS
FOR FIRST YEAR ELEMENTARY TEACHERS (1975-1979)

RATIO	1975 (N=20)		1976 (N=10)		1977 (N=19)		1978 (N=19)		1979 (N=24)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	2.62	2.37	1.98	2.25	2.85	7.31	1.01	1.11	0.91	0.70
i/d	0.76	0.36	0.73	0.41	1.50	1.68	0.73	0.51	0.60	0.32
ST/TT	0.53	0.79	0.88	0.87	0.50	0.23	0.54	0.25	0.63	0.18
Sil/Tot	0.35	0.20	0.30	0.48	0.32	0.28	0.41	0.20	0.47	0.27
Lec/Tot	0.47	0.10	0.28	0.08	0.26	0.23	0.42	0.15	0.46	0.14

TABLE 18

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS
FOR FIRST YEAR SECONDARY TEACHERS (1975-1979)

RATIO	1975 (N=8)		1976 (N=4)		1977 (N=11)		1978 (N=6)		1979 (N=17)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	4.61	4.73	5.48	3.63	3.43	4.97	1.37	1.44	0.99	1.15
i/d	0.71	0.66	0.51	0.33	1.26	1.22	0.54	1.03	0.33	0.25
ST/TT	0.47	0.19	1.17	0.83	1.26	1.69	0.49	0.19	0.45	0.21
Sil/Tot	0.49	0.60	0.17	0.19	0.33	0.30	0.36	0.25	0.42	0.29
Lec/Tot	0.58	0.19	0.65	0.12	0.29	0.18	0.59	0.38	0.61	0.17

understanding, friendly versus aloof, egocentric, restricted teacher behavior; Factor III consisted of items 1, 2, 3 and 4 which described pupil behavior (1, 2). Scores from individual items were summed to obtain a factor score. Table 19 and 20 contain summaries of the means and standard deviations for the three factor scores for the two groups. Again few differences were noted between the groups and across the five years of data reported.

Tuckman Teacher Feedback Form

The Tuckman Teacher Feedback Form (TTFF) was introduced during the 1976-1977 phase of the study to add another dimension of observation. Tables 21 and 22 contain comparison data for the two groups for the four year period of use of the instrument. Again, no differences were noted across the groups or years in the study.

Comparison of B.S. and M.A. Data

Eighteen graduates of the M.A. program were included in the 1979-1980 phase of the application of the Tennessee Technological University Teacher Evaluation Model. The purpose of this section was to present the data accumulated by application of the various instruments and to show comparisons with the results of the application of the model to the B.S. graduates. The mean overall quality point average for the subjects (achieved during their graduate programs was 3.67 with a standard deviation of 0.27. This compared favorably with the quality point average of 3.70 (SD=.28) achieved by the 21 M.A. graduates who participated in the study during 1978-1979. The mean score achieved by 8 of the graduates on the Weighted Commons Examination of the NTE was 541 (SD=46.9). It should be noted that the graduates completed the test during their senior year in college. The F-Scale score for the M.A. graduates was 96.9 (SD=14.6) indicating that the graduates tended to be more authoritarian in their beliefs than the B.S. subjects.

Principal Ratings

Table 23 shows a comparison of the principal ratings of the B.S. and M.A. graduates by teaching level. In general, the ratings attained by the M.A. graduates were slightly higher than for the B.S. graduates. Significant positive correlations (Table 7) were noted between the principals' ratings and the student ratings of the subjects in the area of Democratic Procedure. No explanation can be offered for these correlations. Other significant correlations were noted in a pattern similar to that reported for the B.S. subjects.

Student Evaluation of Teaching

Table 24 shows comparison data for application of the SET-I. In general M.A. subjects were rated higher by their students than were B.S. subjects. Table 25 shows comparison data of the application of the SET-II in the classrooms of both B.S. and M.A. subjects. In general, M.A. subjects were rated slightly higher than B.S. subjects. Correlational data indicated few significant relationships.

TABLE 19

COMPARISON OF COR FACTORS FOR FIRST YEAR ELEMENTARY TEACHERS (1975-1979)

FACTOR	1975 (N=23)		1976 (N=17)		1977 (N=19)		1978 (N=20)		1979 (N=24)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	45.0	4.6	44.3	4.3	44.8	4.3	39.9	4.2	40.0	4.9
II	68.9	6.0	67.9	5.9	70.3	6.1	63.1	6.2	63.3	7.2
III	27.3	4.0	26.8	4.1	25.7	3.0	22.2	2.8	21.5	3.2

TABLE 20

COMPARISON OF COR FACTORS FOR FIRST YEAR SECONDARY TEACHERS (1975-1979)

FACTOR	1975 (N=9)		1976 (N=4)		1977 (N=11)		1978 (N=6)		1979 (N=18)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	40.1	8.7	44.5	5.7	43.5	2.8	38.5	4.6	38.9	4.7
II	60.2	10.3	71.5	6.6	67.7	2.7	64.0	5.6	58.2	7.0
III	22.1	0.6	19.5	5.5	23.5	1.8	21.8	2.2	20.9	2.5

TABLE 21

COMPARISON OF TUCKMAN RATINGS FOR FIRST YEAR ELEMENTARY TEACHERS (1976-1979)

FACTOR	1976 (N=12) $\bar{X}$	1976 (N=12) SD	1977 (N=10) $\bar{X}$	1977 (N=10) SD	1978 (N=18) $\bar{X}$	1978 (N=18) SD	1979 (N=24) $\bar{X}$	1979 (N=24) SD
I CREATIVITY	21.7	4.5	32.7	9.2	26.8	4.4	28.0	5.5
II DYNAMISM (DOMINANCE OF ENERGY)	22.9	7.2	31.4	7.4	30.2	4.6	27.0	5.2
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	31.0	7.4	36.3	7.1	33.0	4.4	32.4	5.8
IV WARMTH AND ACCEPTANCE	27.9	6.8	39.8	5.6	32.0	3.7	36.3	4.6

TABLE 22

COMPARISON OF TUCKMAN RATINGS FOR FIRST YEAR SECONDARY TEACHERS (1976-1979)

FACTOR	1976 (N=3) $\bar{X}$	1976 (N=3) SD	1977 (N=11) $\bar{X}$	1977 (N=11) SD	1978 (N=6) $\bar{X}$	1978 (N=6) SD	1979 (N=16) $\bar{X}$	1979 (N=16) SD
I CREATIVITY	36.3	6.5	30.1	6.2	26.7	3.6	24.3	2.9
II DYNAMISM (DOMINANCE OF ENERGY)	32.0	9.2	32.7	4.9	31.0	5.4	24.9	4.4
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	38.7	4.0	36.5	3.3	29.7	5.4	30.5	4.6
IV WARMTH AND ACCEPTANCE	40.7	2.5	39.0	2.8	34.5	2.6	31.1	3.7

TABLE 23

COMPARISON OF PRINCIPAL RATINGS OF 1979 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=24) $\bar{X}$	B.S. ELEM. (N=24) SD	M.A. ELEM. (N=14) $\bar{X}$	M.A. ELEM. (N=14) SD	B.S. SEC. (N=17) $\bar{X}$	B.S. SEC. (N=17) SD	M.A. SEC. (N=4) $\bar{X}$	M.A. SEC. (N=4) SD
I SUBJECT MATTER COMPETENCE	4.3	0.8	4.5	0.7	4.2	0.7	4.3	0.5
II RELATIONS WITH STUDENTS	4.5	0.7	4.8	0.4	4.0	1.0	4.5	0.6
III APPROPRIATENESS OF ASSIGNMENTS	4.3	0.7	4.6	0.6	4.1	0.9	4.0	0.0
IV OVERALL EFFECTIVENESS	4.3	0.7	4.6	0.6	4.2	0.8	4.3	0.5

TABLE 24

COMPARISON OF SET-I SCORES FOR 1979 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=7) $\bar{X}$	B.S. ELEM. (N=7) SD	M.A. ELEM. (N=11) $\bar{X}$	M.A. ELEM. (N=11) SD	B.S. SEC. (N=18) $\bar{X}$	B.S. SEC. (N=18) SD	M.A. SEC. (N=3) $\bar{X}$	M.A. SEC. (N=3) SD
I FRIENDLY AND CHEERFUL	337.9	36.8	346.0	37.0	316.8	51.8	350.0	28.6
II KNOWLEDGEABLE AND POISED	340.1	26.3	348.7	20.8	335.6	34.2	352.0	7.0
III LIVELY AND INTERESTING	309.9	28.7	292.7	57.5	279.9	62.0	321.7	14.6
IV FIRM CONTROL (DISCIPLINE)	309.6	41.9	339.3	52.3	292.2	39.5	292.6	26.7
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	284.6	57.0	216.7	35.0	227.2	58.8	289.0	31.7
COMPOSITE SCORE	316.4	24.7	308.7	38.5	291.8	37.9	321.3	14.9

TABLE 25

COMPARISON OF SET-II SCORES FOR 1979 B.S. and M.A. GRADUATES

FACTOR		B.S. ELEM. (N=16)		M.A. ELEM. (N=11)	
		$\bar{X}$	SD	$\bar{X}$	SD
I	RAPPORT	5.40	0.53	5.40	0.48
II	INTERACTIONAL COMPETENCE	4.78	0.90	4.80	0.95
III	STIMULATING, INTERACTION STYLE (COMBINATION OF RAPPORT AND INTERACTIONAL COMPETENCE	10.12	0.64	9.68	0.86
IV	UNREASONABLE NEGATIVITY	8.57	0.73	8.84	0.74
V	FOSTERANCE OF SELF-ESTEEM	6.76	0.50	7.00	0.57

Interaction Analysis

Results of the application of interaction analysis is shown in Table 26. In general, M.A. subjects were using more indirect than direct teaching in comparison with B.S. subjects. There appeared to be more student talk in the M.A. classrooms of elementary teachers than in the classrooms of B.S. level subjects. Other ratio differences are in the predicted direction, i.e., in favor of the M.A. subjects. The silence to total teaching ratio correlated significantly with the factors from the COR and the Warmth and Acceptance factor of the TTFF.

Classroom Observation Record

The results of the application of the COR are shown in Table 27. Again the results indicated that the subjects who had achieved the M.A. were functioning at a slightly higher level, although the differences were not significant. Data from the COR were highly correlated with data from the TTFF.

Tuckman Teacher Feedback Form

Table 28 shows the data collected by use of the TTFF. In general, M.A. level subjects were rated higher than B.S. level subjects with the exception of the Warmth and Acceptance factor of the elementary teachers.

Summary

In summary, this chapter contains an overview of the results of the seventh year of the application of the Tennessee Technological University Teacher Evaluation Model to 1979 graduates of the teacher preparation programs. This chapter also contains a comparison of data across five years for those first year B.S. subjects for the period 1975 through 1979. Comparison across years and by level (elementary and secondary) indicated few differences in mean scores. Information for the secondary groups tended to be somewhat erratic due to the small sample sized. Career base line data indicated few differences across the five years of the study for the 1975 through 1979 graduates. In general, the principals rated the subjects quite highly in such areas as ability to work with fellow teachers, ethical behavior, and knowledge of subject matter. Based on measures obtained with the California F-Scale, the subjects tended to be somewhat nonauthoritarian in their beliefs. Employing interaction analysis and other classroom observation techniques, revealed that the subjects were using more indirect than direct teaching methods and were exhibiting many of the characteristics of good teachers as reported in the literature. Student ratings of the subjects indicated concerns in the areas of democratic procedure and discipline. Mean scores for the M.A. subjects were generally higher than for B.S. level subjects. In most cases the differences were not significant.

Reference

(1) Ayers, Jerry B. Report 80-1. A Report of Three Surveys of the 1979 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1980. (mimeo.), 21 pp.

TABLE 26

COMPARISON OF FLANDERS INTERACTION ANALYSIS
FOR 1979 B.S. AND M.A. GRADUATES

RATIO	B.S. ELEM. (N=24)		M.A. ELEM. (N=14)		B.S. SEC. (N=17)		M.A. SEC. (N=4)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	0.91	0.70	1.12	1.02	0.99	1.15	1.12	0.91
i/d	0.60	0.32	0.64	0.32	0.33	0.25	0.22	0.14
ST/TT	0.63	0.18	0.55	0.15	0.45	0.21	0.29	0.08
Sil/Tot	0.47	0.27	0.43	0.22	0.42	0.29	0.35	0.37
Lec/Tot	0.46	0.14	0.45	0.16	0.61	0.17	0.70	0.14

TABLE 27

COMPARISON OF COR FACTOR SCORES FOR
1979 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=24)		M.A. ELEM. (N=14)		B.S. SEC. (N=17)		M.A. SEC. (N=4)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	40.0	4.9	40.4	4.0	38.9	4.7	42.3	3.9
II	63.3	7.2	61.4	8.5	58.2	7.0	62.8	8.4
III	21.5	3.2	20.9	3.0	20.9	2.5	23.5	1.3

TABLE 28

COMPARISON OF TUCKMAN SCORES FOR 1979 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=24)		M.A. ELEM. (N=14)		B.S. SEC. (N=16)		M.A. SEC. (N=4)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I CREATIVITY	28.0	5.5	28.7	6.4	24.3	2.9	27.0	4.8
II DYNAMISM (DOMINANCE OF ENERGY)	27.0	5.2	29.0	4.9	24.9	4.4	30.8	5.4
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	32.4	5.8	33.3	5.2	30.5	4.6	34.0	3.7
IV WARMTH AND ACCEPTANCE	36.3	4.6	33.4	5.4	31.1	3.7	34.8	5.1

CHAPTER III

SUMMARIES OF SPECIAL STUDIES

Throughout the course of the operation of the Tennessee Technological University Teacher Evaluation Model numerous special studies have been conducted and papers disseminated through the professional literature and at regional and national meetings. The Appendix of this report contains a complete listing of all papers published in professional journals and monographs and presented at professional meetings. This chapter consists of summaries and abstracts of papers published or presented during the past year and also summaries of special studies that are currently underway. Complete copies of all papers are available through the noted sources or from the Office of the Associate Dean of the College of Education.

Evaluation for Program Improvement in Teacher Education[1]

Jerry B. Ayers

In 1973 Tennessee Technological University developed and implemented a longitudinal model for gathering systematic data from the graduates of its teacher education programs. The major objectives of the implementation of the model has been to evaluate graduates in order to provide information for use in program development and improvement. The use of the model entered its sixth year in 1978-1979.

Six distinct groups of subjects have participated in the study from one to five years, i.e., graduates from the bachelor's and master's degree programs for the period from 1973 through 1978. Detailed information has been collected on each subject from four distinctly different sources: (1) self-evaluative data; (2) principals and supervisory evaluations; (3) satisfaction of students of the graduates; and (4) data from independent trained observers. The major findings of the study have indicated that each group of first year graduates have changed little over the five year period for which detailed data analyses have been completed. Also few changes have been noted in the subjects who have been in the study for as much as five years. The graduates have exhibited many of the characteristics of good teachers; however, when compared with national samples, they are functioning near the mean. Even though there have been few apparent changes in the graduates during the period of the study, much valuable information has been gathered that has provided for ongoing improvement of the teacher education programs of the University.

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[1]Summary of a paper presented in part before the Fifth International Conference on Improving University Teaching, London, July 1979. Published in part under the title "Meeting Evaluation Standards on Teacher Education Programmes," The Bulletin of Educational Research, 19:14-25, Summer, 1980.

The paper contains a detailed discussion of the uses and results of the implementation of the model at Tennessee Technological University. Also, the paper contains information related to the adaptation of the model for use by most any institution of higher education for the important considerations of program development, modification and improvement in teacher education and other areas.

Teacher Attitudes and Effective Learning Environments[2]

Jerry B. Ayers and Mary Elledge

Teacher attitudes toward a variety of subjects and issues have been studied on a number of occasions. However, there appears to be little information available on the relationships between expressed attitudes and actual behavior in the classroom. Therefore, the purpose of this study was to determine the relationship between expressed attitudes of teachers and actual performance in the learning environment.

Initially, an instrument, Elledge's Classroom Success Scale (ECSS), was developed to assess classroom teachers' attitudes toward effective learning environments. The instrument consisted of 25 words or phrases that allowed teachers to indicate their feelings of the degree of importance of each word or phrase to the learning environment. The words or phrases had been drawn from those descriptors used in the Classroom Observation Record (COR), the Tuckman Teacher Feedback Form (TTFF) and Flanders Interaction Analysis (FIA).

Eighty-six graduates of the bachelor's or master's degree programs for the preparation of elementary teachers at Tennessee Technological University were asked to complete the instrument by indicating their degree of agreement to each item on a scale of 5 = Strongly Agree to 1 = Strongly Disagree. All subjects had completed their degrees at the University between 1971 and 1978, were female, had taught at least one year in Grades K-3, and had participated for at least one year in a longitudinal followup study of the University. During the first year of participation in the followup study, data had been gathered on each subject by independent observers through use of the COR, TTFF, and FIA. This information was based on the learning environment in which the individuals were teaching. Forty-eight (55.8%) subjects completed usable ECSS forms. Comparisons were made across degree level, age and years of experience; and relationships between the ECSS and COR, TTFF, and FIA were examined.

Results of the study indicated the subjects felt that teachers should be "fair," "understanding," and should "praise or encourage." There were no differences in attitudes across age or degree level. Based on data gathered by direct observation, the subjects were demonstrating these characteristics in their classrooms. There were significant relationships between attitudes measured by the ECSS and other data gathered by direct observation. In conclusion, it appeared the subjects' attitudes

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[2]Summary of a paper presented in part before the Annual Meeting of the Mid-South Educational Research Association, Little Rock, November 1979.

toward certain issues were being exhibited in the classroom. Teachers seemed to both perceive and actually use the techniques of being fair, understanding and praising in the classroom. The results of the study have implications for training teachers in the affective aspects of teaching.

Concurrent and Predictive Validity of the National Teacher Examinations[3]

Jerry B. Ayers and Glenda S. Qualls

The purpose of this study was to examine the concurrent and predictive validity of the Weighted Common Examinations and Education in the Elementary School test scores from the National Teacher Examinations for a group of teachers who were graduates of one university. Results of the study of both tests were similar and support the findings of other researchers. Suggestions for use of the results of the study in teacher selection were advanced.

Teacher Evaluation in Early Childhood Education: Application of a Model[4]

Jerry B. Ayers

Recently much attention has been given to the evaluation of teachers at all levels. However, few systematic models have been developed that can provide longitudinal data about teachers. In 1973, Tennessee Technological University developed and implemented a model for systematic data gathering and for making evaluations of the programs for the preparation of teachers. The specific objective of the project has been the evaluation and subsequent modification and improvement of the programs for the preparation of teachers. As an integral part of this study due emphasis has been given to the evaluation of graduates who are employed as teachers of children five through eight. During the seven years of the project three groups of teachers (about 20 in each group) have been followed for five years. Instrumentation and procedures allowed for the collection of data each year from four sources: (1) the graduates (personal data), (2) supervisors of the graduates, (3) students of the graduates, and (4) by independent observers. Application of appropriate statistical techniques have revealed results that have led to the modification of programs for the preparation of early childhood teachers. Based on the success of the project, the evaluation model has been made an integral part of the program at the University and will be continued on an indefinite basis. The full text of the paper discusses in detail the application of the results of the project to preservice program modification at the University and potential uses of the data by teachers for the improvement of instruction in the classroom.

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[3]Abstract of article published in The Journal of Educational Research, 73(2): 86-92, November/December 1979.

[4]Summary of paper presented in part before the International Congress on Early Childhood Education, Tel Aviv, Israel, January 1980.

Tennessee Technological University Teacher Evaluation Model: An Update[5]

Jerry B. Ayers

The purposes of this paper were to (1) introduce the uninformed to the basic concepts of the Tennessee Technological University Teacher Evaluation Model and the manner in which it can be implemented to improve the quality of programs in teacher education, and (2) to provide an update about the use of the model to those who had prior knowledge about the program or who were in attendance at the session teacher evaluation models presented at the 1978 Annual Meeting of the American Association of Colleges for Teacher Education. The body of the paper describes the model briefly and summarizes in general some of the changing patterns that have been found in the data. It was concluded in the paper that the implementation of an extensive system of teacher evaluation at Tennessee Technological University was of value in improving teacher education programs.

A Longitudinal Study of Teachers[6]

Jerry B. Ayers

In 1973 a model was developed and implemented at Tennessee Technological University for systematic data gathering and for making evaluations of programs in teacher education. The specific objectives of the use of the longitudinal model was to provide evaluation data for subsequent modification and improvement of the programs for the preparation of teachers. The model was derived from the work of Sandefur (1970) and was based on generalizations made from the research literature on effective teaching. The model emphasized the gathering of empirical data over a five-year period from four sources including the graduate, supervisors, students of the graduate and by independent observers. The purpose of this paper was to report the results of the application of the model over a five-year period to two groups of graduates who successfully completed a bachelor's degree program leading to teacher certification.

In the fall of 1973, and again in 1974 and 1975, all graduates for the past twelve months were sent a questionnaire requesting routine demographic information and their rating of the attainment of the objectives of the teacher preparation program. All individuals teaching within a 100-mile radius of the University were asked to participate in the longitudinal followup study. Forty-seven - 1973, 33 - 1974, and 34 - 1975 graduates volunteered to become subjects in the study.

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[5]Summary of a paper presented in part before the Annual Meeting of the American Association of Colleges for Teacher Education, Dallas, February 1980.

[6]Summary of a paper presented in part before the Annual Meeting of the American Educational Research Association, Boston, April 1980.

Each year data for the study were collected by means of mail surveys, interviews, and observations in the classroom of the graduates. All subjects were visited each year on at least one occasion by a specially trained graduate assistant. The graduate assistant observed in a subject's classroom for approximately a half day and recorded six to eight 20-minute periods of observation using a ten-category system of interaction analysis developed by Amidon and Flanders. At the completion of all observations, the Classroom Observation Record and the Tuckman Teacher Feedback Form were completed. The Student Evaluation of Teaching (SET-I) was administered during each visit in the classroom of subjects in Grades 4-12 and the SET-II was administered in Grades K-3. The instrument was completed by at least one class of students of each subject each year. While the students were completing the SET, subjects who were participating in the application of the model for the first year completed the California F-Scale Forms 45 and 40. This provided a measure of each subject's open- and closed-mindness. During each visit the observers interviewed the subjects with regard to their opinions and ideas about the teacher preparation program of the University. Also, the observers interviewed principals and asked them to complete the Principal's Questionnaire (an instrument which allowed the principals to rate the level of attainment of the objectives of the teacher preparation program by the graduates) and the Teacher Evaluation by Supervisor Form. Pertinent data such as quality point averages, National Teacher Examination scores, and other standardized measures were gathered from University records. Data analyses were confined largely to descriptive statistics and to the application of the t-test and analysis of variance to determine the relationships among the variables.

Results of the program revealed some interesting relationships among the variables and across time. It should be noted that attrition from the study resulted in relatively small sample sizes in later years of the study and significant differences may be suspect. After five years the 1973, 1974 and 1975 subjects had been reduced by, respectively, 75 percent, 67 percent and 70 percent (11 subjects in each group).

At the time of entrance into the study, the subjects had achieved mean quality point averages on four years of college work of 2.90 and approximately the 50th percentile on the National Teacher Examinations. Means scores on the California F-Scale were 100 indicating that the subjects tended to be open-minded (less authoritarian). There were no significant differences between the two groups.

Principal ratings of the subjects in both groups, and also when divided by elementary and secondary level, increased from the first to the third year and thereafter remained about constant. In comparison, student ratings of both groups by levels reached a high during the third or fourth year and thereafter declined slightly. Several theories were advanced relative to the pattern of ratings given by both principals and students.

Five ratios were used in describing the data obtained from the application of interaction analysis. In general, both groups showed increases from the first to the third year of teaching in the amount of indirect to direct teaching they were employing in the classroom. Thereafter, the ratios remained at about the same level. Student talk to teacher talk and lecture to total teaching ratios remained about constant

across both groups in the study and by teaching level. The lecture to total teaching ratio varied across both five-year periods and there was no pattern evident. As would be expected there were significant differences across elementary and secondary groups. Results from the application of the Classroom Observation Record indicated the subjects tended to receive the highest ratings during their third year in the study. The ratings of the pupil behaviors contained in the instrument remained about constant across the five years for both groups. The Tuckman Teacher Feedback Form was introduced into the study in 1976. Therefore, data were available for only two years for the 1973 subjects, three years for the 1974 subjects, and four years for the 1975 subjects. There was some evidence that led to the conclusion that mean scores were higher during the third or fourth year the subjects participated in the study.

Based on the results of the study, it appeared that the subjects were functioning at their highest level during the third and fourth year after entering the teaching profession. In general, differences across time were not significant. Pertinent correlations were noted between the various measures, thus adding to the validity of the study. Perhaps the most valid criticism of the model, and the one that is of greatest importance, is its failure to use pupil gain as a criterion of teacher effectiveness. However, because of the complexity of using pupil gain as an evaluative criterion, the model was limited to measures of teacher behavior based on research inferences and generalizations derived from the research literature. The evaluative instruments have been demonstrated effective in reputable studies to measure the generalizations formulated as the rationale of the model.

The results of this study have been coupled with results from other studies of the application of the model for the purpose of making changes and improvements in the programs for the preparation of teachers. It is anticipated that in the future differences will be found in the graduates as the programs of the University are changed. Based on the results of this study, it appeared there is a need for special efforts to be made to keep teachers functioning at the levels they reach during their third and fourth years in teaching. The study has implications for the continuing training of teachers through such avenues as teacher centers, formal study toward advanced degrees and inservice education. Presently, studies are underway to determine the influence of attainment of the master's degree on teaching performance. Will the level of performance reached in the third year by individuals with the master's degree be retained?

Reference

Sanderfur, J. T. An Illustrated Model for the Evaluation of Teacher Education Graduates. Washington: American Association of Colleges of Teacher Education, 1970.

Human Relations Skills and Teacher Characteristics[7]

Jerry B. Ayers, Michael E. Rohr and Leroy Bilbrey

The purpose of this study was to examine the relationship of human relation skills possessed by a group of teachers who received their undergraduate preparation at one institution to certain personal characteristics, observations of teaching by independent observers, and ratings by supervisors and children they taught. Results of the study indicated that relationships existed between the levels of human relations skills exhibited and the variables studied. It was concluded that more emphasis should be placed on facilitative response and less on discriminatory activities in human relations classes in the undergraduate teacher education program.

An Examination of Authoritarianism Among Teachers[8]

Jerry B. Ayers and Glenda S. Qualls

A variety of studies in the 1950's reported the relationship between authoritarianism and certain characteristics exhibited by teachers. The California F-Scale was frequently reported as being the primary research instrument. In recent years, however, other instruments have come into use and studies involving the F-Scale have been neglected. The purposes of this present study were to (1) examine the results of administering the California F-Scale to a group of teachers who received their bachelor's or master's degrees from the same institution between 1973 and 1979, (2) compare levels of exhibited authoritarianism with other measures of teacher characteristics, and (3) compare the results with those reported in the literature in the 1950's.

For the past seven years, Tennessee Technological University has conducted a longitudinal followup study of the graduates of its teacher education programs. As an integral part of the first year of participation in the project, the graduates completed the California F-Scale Forms 45 and 40. This 28-item instrument related to opinions regarding a number of social groups and issues about which some people agree and others disagree. Generally a higher score indicated an individual who was more authoritarian in their beliefs. A sample of 210 bachelor's and 90 master's level graduates completed the instrument. In addition, during the first year of participating in the project, data were collected on each graduate through use of Flander's Interaction Analysis, the Classroom Observation Record, Tuckman Teacher Feedback Form, Student Evaluation of Teaching, ratings of level of performance by supervisors, and personal information such as grade point averages and National Teacher Examination scores.

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[7]Abstract of article published in Education, 100(4): 348-351, Summer 1980.

[8]Summary of a paper presented in part before the Annual Meeting of the Mid-South Educational Research Association, New Orleans, November 1980.

Intervention Program for Improvement of Early Childhood and Elementary Student Teaching Component[9]

Mary N. Ayers and James E. Akenson

The objectives of this study and intervention program are (1) to identify from data in the Tennessee Technological University longitudinal teacher education evaluation model five strong and weak teacher effectiveness behaviors; (2) to use the idenfitied ten behaviors and additional needs established from program subjects' testing to formulate the basis for an intervention program, (3) to field-test the intervention program during 1980-81 with thirty early childhood/elementary education majors, and (4) to evaluate the intervention program with dissemination of final results.

The overall objective is to promote a strong teacher training program for early childhood/elementary education majors with the result being a stronger and more effective beginning first-year teacher. Fifteen of the subjects will receive through the means of 15 two-hour seminars the intervention program. The other 15 subjects will serve as the control group.

Evaluation instruments will include the Minnesota Teacher Attitude Inventory, the Classroom Observation Record, the Tuckman Teacher Feedback Form and the Flander's System of Interaction Analysis. Pre- and post-treatment administration of these instruments will be given.

First Year Data: A Comparative Examination of Several Groups

Jerry B. Ayers, Glenda S. Qualls and Sherwell K. Tolleson

Throughout the course of the operation of the Tennessee Technological University Teacher Evaluation Model, several hypotheses have been advanced relative to (1) why subjects withdraw from the study, and (2) why do subjects remain in the project for five years. The purpose of this study was to examine the differences between several groups of individuals who have participated in the project. Career base line data and data collected during first year of participation were chosen as the base for comparison of three groups of individuals including those who completed five years in the project, those who dropped out of the project after one year of participation because of what was perceived as a high degree of anxiety over evaluation, and all other participants.

The findings of the study indicated few differences between the three groups. In general those subjects who participated in the project for five years had achieved lower quality point averages, ACT scores and NTE scores than the other groups and in general scores on the other measures (see Chapter II) indicated the group as a whole during the first year was functioning at a lower level than the other groups. Significant differences were noted on several of these variables. The most interesting

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[9]Study underway during 1980-81. Supported in part with funds provided by the Tennessee Tech Education Foundation.

[10]Summary of unpublished study.

finding of the study was the significantly ($p<.05$) higher rating given by the five year subjects to selected education courses and their level of achievement of objectives of the teacher education program.

In general it was difficult to draw meaningful conclusions from the data. It was interesting to note the high regard the five year participants had for the value of their education at Tennessee Tech in spite of their actual level of achievement and their seemingly lower level of preparation prior to entering the University.

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND FUTURE PLANS

The objectives of Chapter IV were fourfold: (1) presentation of a brief summary of the total evaluation study conducted in 1979-1980; (2) summarize the major conclusions of the study; (3) present recommendations based on the conclusions of the study; and (4) provide a summary of the plans for the continuation of the study during 1980-1981.

Summary

Five groups of subjects (graduates of the teacher preparation program of Tennessee Technological University) were used in the study as follows: (1) 1975, 5; (2) 1976, 6; (3) 1977, 19; (4) 1978, 22; and (5) 1979, 61 (including 20 M.A. and 41 B.S. graduates). Detailed data were collected on each subject by use of standardized instruments and specially constructed questionnaires administered by trained graduate research assistants. Also, personal data about each graduate were collected from University records. Basic instrumentation and procedures for the study were pilot tested during the first year and have remained virtually unchanged. The current year included: (1) University permanent records and transcript information, (2) principals' evaluation of each subject by the use of two different instruments, (3) administration of the California F-Scale (only to those subjects who were participating in the study for the first time) to measure individual prejudices and anti-democratic tendencies; (4) administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form, (5) administration of one form of the Student Evaluation of Teaching to the students of the subjects, and (6) a ten category interaction analysis system to record observed classroom behavior. All data obtained in the study were classified, coded, and keypunched for analyses. Descriptive statistics, intercorrelations and comparisons were computed. The major findings of the study were divided into three major parts, e.g., first year subjects, comparisons of first year subjects, and comparison across years for three groups of subjects.

The major findings of the study for the first year subjects (1979 graduates) were similar to those reported throughout the seven years of the project. Comparisons made between the B.S. and M.A. individuals indicated few significant differences. However, the general trend indicated that those individuals with the M.A. were functioning at a higher level. No detailed explanation of the findings will be given at this point (see Chapter II). Comparisons across years for all first year subjects (1975 through 1979) in the project indicated few differences as did comparison for subjects who had been in the study for five years (see Chapter III for summary). The differences that were noted were minor and in most cases no explanation can be offered for the changes. Subjects appeared to achieve their highest scores on most instruments during their third or fourth year in the study. In summary, it appeared the subjects who had been in the study for more than one year had changed little. Also it appeared that those subjects who entered the study in 1979 were little

different from their counterparts that were in the initial year (1973-1974) of the project.

Based on the findings of the study, several conclusions were advanced and recommendations made for continuation of the study. These follow in the next three sections.

Conclusions

Following are the major conclusions of the study based on the findings. It should be noted that additional analyses of the data are planned that may make other conclusions warranted. This section is divided into three parts: Use of the Evaluation Model, Evaluation of Graduates During 1979-1980, and Comparisons of Data Across Time.

Use of the Evaluation Model

1. The plan of evaluation outlined in this report appeared to be useful in gathering information for modifying and improving the programs of teacher education at Tennessee Technological University.

2. Instrumentation employed in the study appeared to be valid and provided essential information with regard to the graduates of the teacher education programs.

3. Modifications can be made in the original model that can lead to more valid and useful information for an institution wishing to replicate the plan of evaluation.

4. Some problems have resulted in the collection and analyses of data because of attrition of subjects from the study. The largest percentage attrition from the study occurs after the first and third year in the project. Beginning in 1980-1981 subjects will be followed for no more than four years, and thereafter subjects will be followed for only three years.

5. Better and more refined methods are needed for training of the graduate research assistants in the use of the various observation instruments. It was felt that some of the significant differences noted in the study may have been due to unreliable observations.

Evaluation of Graduates During 1979-1980

1. The B.S. and M.A. level subjects in the study for the first year in 1979 appeared to be similar to their counterparts who had participated in earlier phases of the project.

2. B.S. level subjects in the study for the first year had achieved mean scores on the ACT that were comparable to other students who entered the University in 1976.

3. Subjects at both the B.S. and M.A. levels tended to be less authoritarian in their beliefs than other groups. As in past years, the secondary groups tended to achieve higher mean scores on the California F-Scale than the elementary groups.

4. First year elementary teachers received higher ratings on their performance than did first year secondary teachers.

5. Principals' ratings of performance tended to agree with the data collected through use of the Student Evaluation of Teaching, Classroom Observation Record and the Tuckman Teacher Feedback Form.

6. In general, M.A. level subjects received higher ratings on all variables than did B.S. level subjects. Even though the differences were not significant (generally), there was a definite trend that would indicate the individual receiving the master's degree is better prepared at the time of entrance into the classroom.

7. Subjects at higher grade levels were using significantly more lecture in the classroom than teachers in the lower grades.

8. As perceived by students, the teachers in the upper grades were more directive in the instructional activities than teachers in the lower grades.

9. Subjects with greater experience in the classroom appeared to be more fair, democratic, alert, and have a broader base of behavior than the less experienced teachers.

10. Students of subjects in the upper grades felt the teachers did not exercise enough control in the classroom.

11. Subjects with higher quality point averages in education and psychology courses had better relations with students and were in general more friendly and cheerful, knowledgeable and poised, and non-directive in their teaching.

12. Subjects who achieved higher quality point averages in their major teaching fields tended to be more authoritarian oriented than subjects who achieved at a lower level. This was probably due in part to the fact that the large majority of the subjects were teaching in the upper grades where less democratic and more authoritarian teaching methods were used, or the subjects were attempting to complete a specified unit or curriculum.

13. Overall scores achieved by the subjects on the National Teacher Examinations placed the individuals at approximately the 50th percentile which is comparable with other groups that have been studied.

14. Ratings of various aspects of the teacher preparation program of the University by the subjects were similar to that of other groups of individuals.

15. In general, principals' ratings of the subjects were high. However, it should be pointed out that principals rated the subjects somewhat lower in their knowledge and understanding of the sciences and mathematics, lacking effective use of community resources, handling disciplinary problems, and insight into characteristics of behavior. Highest rating of the subjects were noted in the areas of ability to work with and attitudes toward colleagues, ethical behavior, understanding the goals of the school, and cooperation and dependability.

16. There was a positive correlation between the principals' ratings and various items on the Classroom Observation Record and the Student Evaluation of Teaching. Based on the principals' observation, (it appeared that) the subjects in this study possessed many of the characteristics of good teachers as reported in the literature.

17. Based on student observations, the students were highly knowledgeable and poised; and on the negative side, the students perceived the subjects as being more directive than non-directive as measured by the Student Evaluation of Teaching.

18. The subjects in the study appeared to be using more indirect than direct teaching methods in their classrooms. Indirect-direct ratios based on the interaction analysis system used were higher than for comparable groups.

19. Other ratios computed from the interaction analysis observations were comparable to those reported in the literature.

20. Many of the characteristics, reported in the literature, of good teachers were noted as a result of the administration of the Classroom Observation Record.

21. A comparison of the data collected during the first year of those individuals who completed five years in the project with comparable data from other selected groups (e.g., those who dropped out after one year because of expressed anxieties about evaluation or who did not complete four years in the study) indicated that the former group generally received lower ratings on the various instruments, but perceived the program of study of the University as significantly better.

In general, the subjects of this study possessed many of the characteristics of good teachers as reported in the literature. As might be expected, it was difficult to identify specific problems. Principals praised the subjects as did their students. However, it must be kept in mind that the subjects who participated in this study were volunteers. Therefore, some bias was introduced into the total study that may make some of the conclusions invalid where applied to the total population of graduates.

Comparison of Data Across Time

1. Comparisons of first year B.S. data by level (elementary and secondary) indicated few significant differences across the period 1975-1979. Subjects who entered the study at both the elementary or secondary level in 1975, 1976, 1977, 1978, or 1979 appeared to be very similar in their first year of teaching.

2. Comparisons of three groups of subjects by teaching level across time (1973-1977, 1974-1978 and 1975-1979) indicated similar results for the groups. In general, the subjects appeared to achieve their highest ratings in their third or fourth year. The data may be suspect due to the high attrition from the study after the third year. This pattern was evident for both the elementary and secondary subjects.

3. No attempt was made to compare the results of the application of the model to individuals who received the M.A. and were participating in the study. It was estimated that there will be a sufficient sample size to carry out comparisons during 1980-1981.

In summary, the results of the study lead to the conclusions that (1) first year teachers have changed little during the period since the initiation of the study, and (2) teachers may be reaching their optium level of performance in the third or fourth year after entering the profession.

Recommendations

Based on the conclusions of the study, it is felt that the following recommendations were warranted. These recommendations centered largely around the continuation and modification of the study outlined in this report. It was left to the reader to make recommendations relative to his individual problems and concerns and toward needed changes in the teacher education program of the institution.

1. The basic plan outlined in this report should be replicated during 1980-1981 adding another group of subjects who completed the B.S. or M.A. requirements in 1980.

2. Continuing contact should be maintained with other institutions and agencies pursuing similar projects and the literature related to teacher evaluation should be continuously monitored.

3. Consideration will be given to the use of other instruments to gather data.

4. Further analyses of the data should be made employing more sophisticated statistical techniques such as factor analysis and discriminate analysis.

5. Faculty of the institution and other individuals should be encouraged to review the report and to request additional data analyses to fit their individual needs.

6. Better methods should be developed to optimize the participation of subjects in the study.

7. Faculty and administrators should be encouraged to make more effective use of the data that have been collected and to request additional information about points of interest.

8. A more extensive data bank of information on all students in the teacher education programs should be established. Thereafter, a more meaningful study can be made in relation to predicting the success of graduates in teaching.

9. Work should continue on the development of other phases of the total evaluation project, i.e., instrumentation for use with Ed.S. level graduates and for those individuals in such fields as administration, supervision and counseling.

Plans for the Continuation of the Study During 1979-1980

During 1979-1980, particular emphasis will be placed on studies of graduates of the teacher preparation programs for the period 1979 through 1980. Subjects who graduated prior to 1977 will be dropped from further study as per the original design or because of financial constraints imposed on the project. The potential population of 1977 through 1979 graduates was 90. In addition, a sample of approximately fifty 1980 graduates will be added to the study.

Figure 2 shows an abbreviated chart for the major activities of the project during 1979-1980. This same plan will be followed during 1980-1981. Initially, two graduate assistants will engage in intensive studies of the use of the observational instruments. This will occur from approximately September 15 through October 20. Concurrent with these activities, a schedule of visitations will be developed for the 1979 through 1980 graduates that have previously participated in the study. The 90 individuals will be visited starting the later part of October 1980. Visitation will continue until the end of January or the early part of February 1981.

As soon as possible after the beginning of the fall quarter, a survey questionnaire will be sent to all 1980 graduates (Fall 1979, Winter 1980, Spring 1980, and Summer 1980) of the teacher preparation programs of the University. At this same time the 1980 graduates will be asked to participate in the study. It is anticipated that a sample of 30 B.S. level graduates and 20 M.A. level graduates will be selected. During the early part of the winter of 1981, a schedule of visitation for three individuals will be prepared. During the late winter and spring of 1981, these individuals will be visited for purposes of observation and gathering baseline data. Particular attention will be given to a study of the graduates of the M.A. program who are in the classroom.

Beginning in the late spring and continuing through the summer of 1981, data analyses will be made and a report of the eighth year activities of the project will be prepared. It is anticipated that the report will include detailed comparisons with the results obtained in the previous years of the study. Also during the year, efforts will be made to revise and update the various questionnaires and forms used as a part of the study. It is anticipated that these revisions will result in the collection of better and more usable data.

During 1980-1981, one or more special studies will be carried out that will lend extra data to the total project. It is anticipated that a detailed study will be made of the use of the observation instruments that are completed by principals and the independent observers (graduate assistants). Also, the project staff will work with faculty in the Department of Elementary Education on a special study to incorporate previous years' findings in making program modifications for preservice early childhood and elementary teachers.

Long Range Plans

Based on the high level of acceptance of the project by the University and the interest shown by other groups, the project has been integrated into the total operation of the teacher education program.

At the present time, it is anticipated that the basic plans outlined in the first chapter of this report will be continued on an indefinite basis. The literature on teacher education and program evaluation will be monitored and changes may be made in the basic instrumentation and methods of data collection. Future attention will be given to the development of alternative methods of teacher evaluation and the development of systems for the evaluation of data related to the programs of the University in such areas as public personnel services.

APPENDIX

REPORTS AND STUDIES RELATED TO THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

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4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education," Educational and Psychological Measurement, 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers at Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

6. Ayers, Jerry B. Report V-Restudy. A Report of Two Surveys of the 1971 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1972. (mimeo.), 28 pp.

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8. Dotson, James R. and Jerry B. Ayers. "A Systematic Plan for the Restudy of a Teacher Education Program," The Tennessee Tech Journal, 7:85-89, 1972.

9. Ayers, Jerry B. and Michael E. Rohr. "The Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance for Education, Engineering, and Business Majors," Presented before the American Educational Research Association, April, 1972, Chicago, IL.

10. Brimm, Jack L. and Jerry B. Ayers. "Attitudes of Students Toward Education and Liberal Arts Courses," Presented before the Mid-South Educational Research Association Meeting, November, 1973, Memphis, TN.

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16. Ayers, Jerry B. and Robert E. DuBey. "Student Teachers Attitudes Towards Supervising Teachers," The Educational Catalyst, 4:17-22, 1974.

17. Ayers, Jerry B. and Michael E. Rohr. "Relationship of Selected Variables and Success in a Teacher Preparation Program," Educational and Psychological Measurement, 34(4):933-37, Winter, 1974.

18. Ayers, Jerry B. Report 74-3. Study of the Graduates of the Library Science Program of Tennessee Technological University 1969-73. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 28 pp.

19. Bilbrey, Leroy. Human Relations Skills and Teacher Effectiveness. Unpublished M.A. Thesis, College of Education, Tennessee Technological University, 1974.

20. Ayers, Jerry B. Report 74-4. Tennessee Technological University Teacher Evaluation Model. Cookeville, TN: Tennessee Technological University, College of Education, 1974, (mimeo.), 92 pp. ERIC No. 095 169.

21. Duncan, Barbara Louise. Report 74-5. Study of the Graduates of the Counselor Education Program of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974, (mimeo.), 33 pp.

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27. Ayers, Jerry B. Report 75-4. Tennessee Technological University Teacher Evaluation Model-Year II. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 61 pp. ERIC No. 123 210.

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37. Ayers, Jerry B. Report 77-2. Tennessee Technological University Teacher Evaluation Model-Year IV, Cookeville, TN: Tennessee Technological University, College of Education, 1977, 100 pp. ERIC Document No. 148 778.

38. Ayers, Jerry B. Report 78-1. A Report of Three Surveys of the 1977 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1978, (mimeo.), 20 pp.

39. Ayers, Jerry B. Report 78-2. Tennessee Technological University Teacher Evaluation Model-Year V, Cookeville, TN: Tennessee Technological University, College of Education, 1978, 54 pp. ERIC Document No. 167 487.

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